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"Illumination system, especially for EUV-lithography", US Serial No. 09/305,017, submitted on May 4, 1999, entitled "Illumination system particularly for EUV-lithography", now US Patent No. 6,198,793 B1, and PCT/EP 99/02999, submitted on May 4, 1999, entitled "Illumination system, especially for EUV-lithography", whose disclosure contents are incorporated in their entirety in the present application.

IN THE CLAIMS

Please cancel claims 54 and 55.

Please amend the claims below to read as indicated herein. A version of the amended claims with markings to show changes made is included at the end of this document.

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1 ~~38~~. (Amended) An illumination system, comprising:
a plurality of primary light sources having wavelengths ≤ 193 nm; and
an optical unit for combining said plurality of primary light sources, said optical unit having a first plurality of raster elements for transforming said plurality of primary light sources into a plurality of secondary light sources,
wherein each of said first plurality of raster elements is reflective and is imaged into a plane to form one of a plurality of images.

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5 ~~42~~. (Amended) The illumination system of claim ~~38~~¹, wherein each of said first plurality of raster elements is arranged and oriented to superimpose said plurality of images in said plane to form an illuminated field.

6 ~~42~~. (Amended) The illumination system of claim ~~42~~⁵,
wherein said optical unit comprises a structure having a plurality of sides,
wherein each of said plurality of sides corresponds to one of said plurality of primary light sources, and
wherein said first plurality of raster elements is arranged on said plurality of sides.

B₁₀ 8/ 45. (Amended) The illumination system of claim 38, wherein said optical unit further comprises a second plurality of raster elements.

9/ 46. (Amended) The illumination system of claim 45, wherein each of said plurality of secondary light sources is located on one of said second plurality of raster elements, and wherein each of said first plurality of raster elements and each of said second plurality of raster elements superimposes said plurality of images in said plane to form an illuminated field.

B₁₁ sub 2 C 48. (Amended) The illumination system of claim 47, wherein said optical unit comprises a structure having a plurality of sides, wherein each of said plurality of sides corresponds to one of said plurality of primary light sources, and wherein said second plurality of raster elements is arranged on said plurality of sides.

12/ 49. (Amended) The illumination system of claim 48, wherein each of said plurality of sides superimposes said plurality of images in said plane to form an illuminated field.

13/ 50. (Amended) The illumination system of claim 46, wherein said optical unit comprises a plurality of structures, wherein each of said plurality of structures has a plurality of sides, wherein each of said plurality of sides corresponds to one of said plurality of primary light sources, and wherein each of said second plurality of raster elements is arranged on one of said plurality of sides.

14/ 51. (Amended) The illumination system of claim 50, wherein each of said plurality of sides superimposes said plurality of images in said plane to form an illuminated field.

B.12 17 ~~56~~. (Amended) The illumination system of claim ~~46~~⁹, wherein each of said second plurality of raster elements has a planar surface.

B.13 19 ~~58~~. (Amended) A projection exposure system comprising:
the illumination system of claim ~~38~~¹;
a mask located in said plane;
a projection objective lens; and
a light-sensitive object on a carrier system, wherein an image of said mask is formed on said light-sensitive object.

20 ~~59~~. (Amended) A method for production of microelectronic components, comprising the step of using said projection exposure system of claim ~~58~~¹⁹.

Please add the following new claims, numbered as 60 through 62. ✓

B.14 21 ~~60~~. (New) The illumination system of claim ~~42~~⁶, wherein said structure is in a shape of a pyramid.

22 ~~61~~. (New) The illumination system of claim ~~48~~¹¹, wherein said structure is in a shape of a pyramid.

23 ~~62~~. (New) The illumination system of claim ~~50~~¹³, wherein said plurality of structures are each in a shape of a pyramid.